Michael Ramscar

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1. Research Interests

The discriminative nature of learning and its relationship to theories of cognitive function
The effects of learning from different information structures
The information structure of human communication systems
The social evolution of linguistic structure
The communicative structure and function of proper names
The nature and development of cognitive control processes
Neurocognitive development
Language learning and bilingualism
Learning across the lifespan
The measurement of cognitive capacity and performance

2. Professional Experience

Senior Researcher
Tübingen University, Department of Quantitative Linguistics (2011-present)

Assistant Professor of Psychology
Stanford University, Psychology Department (2002-2010)

Lecturer in Computational Models of Human Cognition
Edinburgh University, Division of Informatics (1999-2002)

Lecturer
Edinburgh University, Department of Artificial Intelligence (1997-1999)

Research Associate
Edinburgh University, Department of Architecture (1991-1996)

3. Education

APA Advanced Training Institute in fMRI (2001)
Massachusetts General Hospital, Boston, MA

Ph.D., Cognitive Science & Artificial Intelligence (1995-1999)
Edinburgh University, Edinburgh, Scotland

MSc., Computer Science & Electronic Engineering (1989-1990)
Strathclyde University, Strathclyde, Scotland

B.A., Philosophy, with Honours (1986-1989)
Kings College, University of London, England

4. Research Awards & Grants

2020	€160.000	German Research Foundation: "Abstraction Processes in Associative learning" (Project A3 in RU 2718; with Barbara Kaup & Mandy Hütter)
2019	£320,000	Leverhulme Trust in support of research into discriminative approaches to language learning (with Elizabeth Wonnacott)
2007	$750,000	NSF grant in support of research into the probabilistic nature of grammar (with Joan Bresnan, Dan Jurafsky & Tom Wasow).
2006	$400,000	NSF CAREER Award in support of language learning research.
1999	£100,000	Engineering and Physical Sciences Research Council (EPSRC) grant in support of analogy modelling research
1999	(declined)	Awarded one of 5 "Enterprise Ireland" Post-Doctoral Fellowships
1994	£200,000	EPSRC grant in support of design modelling research.

5. Refereed Publications

5.1 Journal Articles

1. Hoppe, D. B., Hendriks, P., **Ramscar, M.,** & van Rij, J. (2022). An exploration of error-driven learning in simple two-layer networks from a discriminative learning perspective. Behavior Research Methods. https://doi.org/10.3758/s13428-021-01711-5

2. **Ramscar, M.** (2021). A discriminative account of the learning, representation and processing of inflection systems, Language, Cognition and Neuroscience, DOI: 10.1080/23273798.2021.2014062

3. **Ramscar, M.** (2021). How children learn to communicate discriminatively. Journal of Child Language, 48(5), 984-1022.

4. Hoppe, D.B, van Rij, J, Hendriks, P. and **Ramscar, M** (2021) Order matters! Influences of linear order on linguistic category learning. Cognitive Science, https://doi.org/10.1111/cogs.12910

5. Vujović, M., **Ramscar, M.** &, Wonnacott, E. (2021) Language learning as uncertainty reduction: The role of prediction error in linguistic generalization and item-learning, Journal of Memory and Language, 119, 104231

6. Freudenthal, D., **Ramscar, M.,** Leonard, L., & Pine, J. (2021). Simulating the acquisition of verb inflection in typically developing children and children with Developmental Language Disorder in English and Spanish. Cognitive Science, 45, 3, e12945

7. Tomaschek, F., Tucker, B.V., **Ramscar, M**. & Baayen, H (2021) Paradigmatic enhancement of stem vowels in regular English inflected verb forms. Morphology. https://doi.org/10.1007/s11525-021-09374-w

8. Bröker, F. & **Ramscar, M.** (2020) Representing absence of evidence: why algorithms and representations matter in models of language and cognition. Language, Cognition and Neuroscience, DOI: 10.1080/23273798.2020.1862257.

9. Tomaschek, F., Arnold, D., Sering, K., van Rij, J., Tucker, B. V. and **Ramscar, M**. (2020), 'Articulatory variability is reduced by repetition and predictability', Language and Speech DOI: 10.1177/0023830920948552

10. Pagán Cánovas, C., Valenzuela, J., Alcaraz Carrión, D., Olza, I., & **Ramscar, M.** (2020). Quantifying the speech-gesture relation with massive multimodal datasets: Informativity in time expressions. Plos One, 15(6), e0233892.

11. Linke, M., & **Ramscar, M**. (2020) How the Probabilistic Structure of Grammatical Context Shapes Speech, Entropy 22(1), 90.

12. Hendrix, P, **Ramscar, M**., & Baayen, H. (2019) "NDRA: A single route model of response times in the reading aloud task based on discriminative learning." PloS One 14, no. 7 : e0218802.

13. Wulff, D U., & Aging Lexicon Consortium. (2019). "New perspectives on the aging lexicon." Trends in Cognitive Sciences, Vol. 23, No. 8, 686-698.

14. Dye, M., Milin, P., Futrell, R., & **Ramscar, M**. (2018). Alternative solutions to a language design problem: The role of adjectives and gender marking in efficient communication. Topics in Cognitive Science 10(1): 209-224. doi: 10.1111/tops.12316

15. **Ramscar, M,** Sun, C. C., Hendrix, P., & Baayen, H. (2017). The Mismeasurement of Mind: Life-Span Changes in Paired-Associate-Learning Scores Reflect the "Cost" of Learning, Not Cognitive Decline. Psychological Science, 28(8), 1171-1179.

16. Linke, M., Bröker, F., **Ramscar, M.,** & Baayen, H. (2017). Are baboons learning" orthographic" representations? Probably not. PloS One, 12(8), e0183876.

17. Milin, P., Feldman, L. B., **Ramscar, M**., Hendrix, P., & Baayen, R. H. (2017). Discrimination in lexical decision. PLoS One, 12(2), e0171935.

18. **Ramscar, M.** (2016). Learning and the replicability of priming effects. Current Opinion in Psychology, 12, 80-84.

19. Blanco, N.J., Love, B.C., **Ramscar, M.**, Otto, A.R., Smavda, K., & Maddox, W.T (2016). Exploratory decision-making as a function of lifelong experience, not cognitive decline. Journal of Experimental Psychology: General, 145(3), 284.

20. Baayen, R. H., Shaoul, C., Willits, J., & **Ramscar, M.** (2016). Comprehension without segmentation: A proof of concept with naive discriminative learning. Language, Cognition and Neuroscience, 31(1), 106-128.

21. Westbury, C., Shaoul, C., Moroschan, G., & **Ramscar, M.** (2016). Telling the world's least funny jokes: On the quantification of humor as entropy. Journal of Memory and Language. (86), 141

22. Baayen, R.H., Milin, P. & **Ramscar, M**. (2016) Frequency in lexical processing. Aphasiology (30): 11, 1174-1220.

23. **Ramscar, M**., & Port, R. F. (2016). How spoken languages work in the absence of an inventory of discrete units. Language Sciences, 53, 58-74.

24. **Ramscar, M.**, Hendrix, P., Shaoul, C., Milin, P. & Baayen, R.H. (2014). The myth of cognitive decline: Nonlinear dynamics of lifelong learning. Topics in Cognitive Science, 6, 5-42.

25. **Ramscar, M.** & Baayen, H. (2014) Why our brains work better with age. New Scientist, 2961, 28

26. **Ramscar, M.**, Dye, M., & McCauley, S. (2013). Error and expectation in language learning: The curious absence of 'mouses' in adult speech. Language, 89(4), 760-793.

27. **Ramscar, M.**, Dye, M., & Klein, J. (2013). Children value informativity over logic in word learning. Psychological Science, 24(6), 1017-1023.

28. **Ramscar, M.**, Dye, M., Gustafson, J., & Klein, J. (2013). Dual routes to cognitive flexibility: Learning and response conflict resolution in the dimensional change card sort task. Child Development, 84(4), 1308-23.

29. **Ramscar, M.**, Hendrix, P., Love, B. & Baayen, H. (2013) Learning is not decline: The mental lexicon as a window into cognition across the lifespan. The Mental Lexicon, 8(3), 450-481.

30. **Ramscar, M.** & Baayen, H. (2013). Production, comprehension and synthesis: A communicative perspective on language. Frontiers in Language Sciences, 4, 233. doi: 10.3389/fpsyg.2013.00233

31. **Ramscar, M.** (2013). Suffixing, prefixing, and the functional order of regularities in meaningful strings. Psihologija, 46(4), 377-396.

32. Baayen, R.H., Hendrix, P., & **Ramscar, M.** (2013). Sidestepping the combinatorial explosion: Towards a processing model based on discriminative learning. Language and Speech, 56(3), 329.

33. **Ramscar, M.**, Dye, M., & Hubner, M. (2013). When the fly flied and when the fly flew: How semantics can make sense of inflection. Language and Cognitive Processes, 28(4), 468-97.

34. Arnon, I. & **Ramscar, M.** (2012). Granularity and the acquisition of grammatical gender: How order of acquisition affects what gets learned. Cognition, 122(3), 292-305.

35. **Ramscar, M.**, Dye, M., Popick, H.M., & O'Donnell-McCarthy, F. (2011). The enigma of number: Why children find the meanings of even small number words hard to learn and how we can help them do better. PLoS ONE, 6(7), e22501. doi:10.1371/journal.pone.0022501

36. **Ramscar, M.** & Dye, M. (2011). Learning Language from the Input: Why level ordering can't explain noun-compounding. Cognitive Psychology, 62(1), 1-40.

37. Matlock, T., Holmes, K.J., Srinivasan, M., & **Ramscar, M.** (2011). Even abstract motion influences the understanding of time. Metaphor and Symbol, 26(4), 260-271.

38. **Ramscar, M.** (2010). Computing machinery and understanding. Cognitive Science, 34(6), 966.

39. **Ramscar, M.**, Yarlett, D., Dye, M., Denny, K., & Thorpe, K. (2010). The Effects of Feature-Label-Order and their implications for symbolic learning. Cognitive Science, 34(6), 909-957.

40. **Ramscar, M.**, Matlock, T., & Dye, M. (2010). Running down the clock: the role of expectation in our understanding of time and motion. Language and Cognitive Processes, 25(5), 589-615.

41. Thompson-Schill, S., **Ramscar, M.**, & Chrysikou, M. (2009). Cognition without control: When a little frontal lobe goes a long way. Current Directions in Psychological Science, 8(5), 259-263.

42. St. Clair, M., Monahan, P., & **Ramscar, M.** (2009). Relationships between language structure and language learning: The suffixing preference and grammatical categorization. Cognitive Science. 33(7): 1317-1329.

43. **Ramscar, M.** & Yarlett, D.. (2007). Linguistic self-correction in the absence of feedback: A new approach to the logical problem of language acquisition Cognitive Science, 31, 927-960.

44. **Ramscar, M.** & Gitcho, N. (2007). Developmental change and the nature of learning in childhood. Trends In Cognitive Science, 11(7), 274-279.

45. Alloway, T.P., Corley, M., & **Ramscar, M.** (2006). Seeing ahead: Experience and language in spatial perspective. Memory and Cognition, 34, 380-386.

46. Matlock, T, **Ramscar, M.**, & Boroditsky, L. (2005). The experiential link between spatial and temporal language. Cognitive Science, 29, 655-664.

47. **Ramscar, M.** & Yarlett, D. (2003) Grounding semantics in analogical processing: An environmental approach. Cognitive Science, 27, 41-71.

48. **Ramscar, M.** (2002). The role of meaning in inflection: Why the past tense doesn't require a rule. Cognitive Psychology, 45(2), 45-94.

49. Boroditsky, L. & **Ramscar, M.** (2002). The roles of body and mind in abstract thought. Psychological Science, 13(2), 185-188.

50. Morales R, Pain H, **Ramscar M.** (1998) Modeling the cognitive effects of participative learner modeling. Lecture Notes in Artificial Intelligence. 1452: 613.

51. **Ramscar, M.**, Lee, J.R., & Pain, H.G. (1998). Reply to Per Galle's: 'Product Modelling: 20 years of Stalemate?' Design Studies, 19, 241-244.

52. **Ramscar, M.**, Lee, J.R., & Pain, H.G. (1996). A classification-based methodology for the integration of agent views within design systems. Design Studies, 17, 465-483.

5.2 Book Chapters

1. Baayen, R. Beaman, K. & **Ramscar, M.** (2021) Defounding the effects of competition and attrition on dialectacross the lifespan: a panel study investigation of Swabian German. To appear: Language Variation and Language Change Across the Lifespan: Theoretical and Empirical Perspectives from Panel Studies. Karen V. Beaman and Isabelle Buchstaller (eds). New York: Routledge.

2. **Ramscar, M.,** Dye, M., Blevins, J., & Baayen, H. (2018). Morphological development. Handbook of Communications Disorders: Theoretical, Empirical, and Applied Linguistic Perspectives, 15, 1842.

3. Baayen, R. H., Tomaschek, F., Gahl, S. & **Ramscar, M.** (2017). The Ecclesiastes principle in language change. In M. Hundt, S. Mollin & S. Pfenninger (Eds.), The Changing English Language: Psycholinguistic Perspectives. Cambridge, UK: Cambridge University Press.

4. Blevins, J.P., Milin, P., & **Ramscar, M.** (2017). The Zipfian Paradigm Cell Filling Problem. In F. Kiefer, J.P. Blevins, & H. Bartos (Eds.) Morphological Paradigms and Functions. Brill: Leiden.

5. Dye, M., Milin, P., Futrell, R., & **Ramscar, M.** (2017). A functional theory of gender paradigms. In F. Kiefer, J.P. Blevins, & H. Bartos (Eds.) Morphological Paradigms and Functions. Brill: Leiden.

6. Blevins, J. P., Ackerman, F., Malouf, R. & **Ramscar, M**. 'Morphology as an adaptive discriminative system'. In H. Harley & D. Siddiqi (eds.), Morphological Metatheory, Benjamins, §10: 269–300

7. **Ramscar, M.** & Port, R. (2015). Categorization (without categories). In E. Dawbroska & D. Divjak (Eds.), Handbook of Cognitive Linguistics. De Gruyter Mouton.

8. Baayen, R.H. & **Ramscar, M.** (2015). Abstraction, storage, and naive discriminative learning. In Dabrowska, E. and Divjak, D. (eds.), Handbook of Cognitive Linguistics, 99-120. De Gruyter Mouton.

9. **Ramscar, M.** & Baayen, R.H. (2014). Learning and cognitive maturation. In S. Krauss Whitbourne (Ed.), The Encyclopedia of Adulthood and Aging. Wiley-Blackwell.

10. **Ramscar, M.**, Boroditsky, L., & Matlock, T. (2010). Time, motion and meaning - the experiential basis of abstract thought. In Language is spatial, not special: Using space for language and memory. L. Smith, K. Mix, & M. Gasser (Eds.), Spatial Foundations of Cognition and Language. Oxford University Press.

11. Hahn, U. & **Ramscar, M.** (2001). Mere similarity? In U. Hahn & M.Ramscar, (eds.) Similarity and Categorization. Oxford: Oxford University Press.

12. **Ramscar, M.** & White, R.H. (1993). A Goal Driven Approach to Knowledge Extraction. In H. Kangassola (ed) Information and Knowledge Modelling - Frontiers in Artificial Intelligence. Amsterdam: ISO Press. 196-206.

5.3 Edited Volumes & Proceedings

1. Hahn, U. & **Ramscar, M.** (Eds.) (2001). Similarity and Categorization. Oxford University Press.

2. **Ramscar, M.**, Hahn, U., Pain, H., & Cambouropoulos, C. (Eds.) (1997). Proceedings of the International Workshop on Similarity and Categorization, University of Edinburgh 1997. Department of Artificial Intelligence, University of Edinburgh.

5.4 Journal Abstracts

1. Davidenko, N., Remus, D., **Ramscar, M.**, & Grill-Spector, K. (2008). Stronger face-selective responses to typical versus distinctive faces when stimulus variability is controlled. Journal of Vision, 8(6), 531.

2. Davidenko, N., & **Ramscar, M.** (2005). The distinctiveness effect reconsidered: Poorer recognition of distinctive face silhouettes. Journal of Vision, *5*(8), 981.

5.5 Commentaries

1. **Ramscar, M.** (2003). The past-tense debate: exocentric form versus the evidence. Trends in Cognitive Science, 7(3), 107-8.

2. Yarlett D. & **Ramscar M.** (2003). Overfurnishing Empiricism? Metascience, 12(3), 279-303.

3. Boroditsky, L. & **Ramscar, M.** (2001). "First, we assume a spherical cow…" Tenenbaum & Griffiths, Generalization, Similarity, and Bayesian Inference. Behavioral & Brain Sciences.

5.6 Conference Publications

1. Vujović, M., **Ramscar, M.,** & Wonnacott, E. (2019). Language learning as uncertainty reduction: the effects of prediction error and entropy on generalization and item-learning. Talk presented at Interdisciplinary advances in Statistical Learning. San Sebastian, Spain

2. Hoppe, D., van Rij, J. & **Ramscar, M.** (2018) Order matters! How marking order influences learning of categories in language. 31st Annual CUNY Sentence Processing Conference, Davis, CA.

3. Vujović, M., **Ramscar, M**., & Wonnacott, E. (2018). The role of prediction error in linguistic generalization and item-based learning. Architectures and Mechanisms of Language Processing. Berlin, Germany

4. Dye, M., Milin, P., Futrell, R., & **Ramscar, M**. (2017). Cute Little Puppies and Nice Cold Beers: An Information Theoretic Analysis of Prenominal Adjectives. Proceedings of the 39th Annual Conference of the Cognitive Science Society, London, UK.
   Winner of the Marr Prize for the best paper with a student first author

5. Dye, M., Jones, M., Yarlett, D., & **Ramscar, M.** (2017). Refining the distributional hypothesis: A role for time and context in semantic representation. Proceedings of the 39th Annual Conference of the Cognitive Science Society, London, UK.

6. **Ramscar, M,** Sun, C-C., Hendrix, P. & Baayen, R. H. (2016). The mismeasurement of mind: How neuropsychological testing creates a false picture of cognitive aging. Proceedings of the 38th Annual Conference of the Cognitive Science Society, Philadelphia, PA.

7. Dye, M., Johns, B. T., Jones, M.N., & **Ramscar, M**. (2016). The structure of names in memory: Deviations from uniform entropy impair memory for linguistic sequences. Proceedings of the 38th Annual Conference of the Cognitive Science Society, Philadelphia, PA.

8. Blevins, J., Milin, P., & **Ramscar, M.** (2015). Zipfian discrimination. In Vito Pirrelli, Claudia Marzi, Marcello Ferro (eds.): Word Structure and Word Usage. Proceedings of the NetWordS Final Conference, Pisa: 29–31.

9. Blevins, J. & **Ramscar, M.** (2014) Uncertainty and discriminability in information-theoretic WP. Symposium on Information Theory in Morphology, 16th International Morphology Meeting, Budapest, Hungary.

10. **Ramscar, M.**, Hendrix, P., & Baayen, R.H. (2013). The myth of cognitive decline. Proceedings of the 35th Meeting of the Cognitive Science Society, Berlin, Germany.

11. **Ramscar, M.**, Smith, A.H., Dye, M., Futrell, R., Hendrix, P., Baayen, R.H., & Starr, R. (2013) The 'universal' structure of name grammars and the impact of social engineering on the evolution of natural information systems. Proceedings of the 35th Meeting of the Cognitive Science Society, Berlin, Germany.

12. **Ramscar, M.**, Dye, M., Popick, H., & O'Donnell-McCarthy, F. (2011). How children learn to value numbers: Information structure and the acquisition of numerical understanding. Proceedings of the 33rd Meeting of the Cognitive Science Society, Boston, MA.
    Winner of the CaSL Prize from the Institute of Education Sciences

13. **Ramscar, M.**, Suh., E., & Dye, M. (2011). A Steep Price to Pay? On the Costs and Benefits of Learning Relative Pitch. Proceedings of the 33rd Meeting of the Cognitive Science Society, Boston, MA.

14. **Ramscar, M.**, Klein., J., Dye, M., Aguirre, N., & Ruiz, L.D. (2011). Informativity versus logic: Children and adults take different approaches to word learning. Proceedings of the 33rd Meeting of the Cognitive Science Society, Boston, MA.

15. Popick, H., Dye, M., Kirkham, N., & **Ramscar, M.** (2011). Investigating how Infants Learn to Search in the A-not-B Task. Proceedings of the 33rd Meeting of the Cognitive Science Society, Boston, MA.

16. November, A. & **Ramscar, M.** (2011). Breaking the World into Symbols. Proceedings of the 33rd Meeting of the Cognitive Science Society, Boston, MA.

17. Kao, J., Ryan, R., Dye, M., & **Ramscar, M.** (2010). An acquired taste: How reading literature affects sensitivity to word distributions when judging literary texts. Proceedings of the 32nd Meeting of the Cognitive Science Society, Portland, OR.

18. Kosaraju, R., Dye, M., & **Ramscar, M.** (2010). Of Frames and Frequencies: How Early Language Production is Influenced by the Distribution. Proceedings of the 36th Meeting of the Society for Philosophy & Psychology, Portland, OR

19. **Ramscar, M.** & Dye, M. (2009). No representation without taxation: The costs and benefits of learning to conceptualize the environment. 2nd International Analogy Conference, Sophia, Bulgaria.

20. **Ramscar, M.** & Dye, M. (2009). Error and expectation in language learning: An inquiry into the many curious incidents of 'mouses' in adult speech. Proceedings of the 31st Meeting of the Cognitive Science Society, Amsterdam, Netherlands.

21. **Ramscar, M.**, Yarlett, D., Dye, M., & Kalchbrenner, N. (2009). The Feature-Label-Order Effect in Symbolic Learning. Proceedings of the 31st Meeting of the Cognitive Science Society, Amsterdam, Netherlands.

22. **Ramscar, M.**, Dye, M., Witten, J., & Klein, J. (2009). Two routes to cognitive flexibility: Learning and response conflict resolution in the dimensional change card sort task. Proceedings of the 31st Meeting of the Cognitive Science Society, Amsterdam, Netherlands.

23. Arnon, I., & **Ramscar, M.** (2009). Granularity and the acquisition of grammatical gender: How order of acquisition affects what gets learned. Proceedings of the 31st Meeting of the Cognitive Science Society, Amsterdam, Netherlands

24. Arnon, I. & **Ramscar, M.** (2008). How order-of-acquisition shapes language learning: the case of grammatical gender. Boston University Conference on Language Development, Boston, MA.

25. **Ramscar, M.**, Thorpe. K., & Denny., K. (2007). Surprise in the learning of color words. Proceedings of the 29th Meeting of the Cognitive Science Society, Nashville, TN.

26. Bannard, C. & **Ramscar, M.** (2007). Reading time evidence for storage of frequent multiword sequences. Proceedings of Architectures and Mechanisms for Language Processing 2007, Turku, Finland.

27. Smith, A.H. & **Ramscar, M.** (2007). First Language Translations in New Language Learning. Proceedings of the Second European Cognitive Science Conference, Delphi, Greece.

28. Davidenko, N., & **Ramscar, M.** (2003). Age and gender: similarly cued from silhouetted face profiles. Proceedings of the 25th Annual Conference of the Cognitive Science Society. Boston, MA.

29. Yarlett, D. & **Ramscar, M.** (2003). Belief Revision in Causal Induction Proceedings of the 25th Annual Conference of the Cognitive Science Society. Boston, MA.

30. Yarlett, D. & **Ramscar, M.** (2002). A Quantitative Model of Counterfactual Reasoning. Advances in Neural Information Processing Systems 14, MIT Press.

31. **Ramscar, M.** (2002). When the fly flied and when the fly flew: The effects of semantics on past tense inflection, Proceedings of the 24th Annual Conference of the Cognitive Science Society. Fairfax, VA.

32. Yarlett, D. & **Ramscar, M.** (2002). Uncertainty in causal and counterfactual inference. Proceedings of the 24th Annual Conference of the Cognitive Science Society. Fairfax, VA.

33. Boroditsky, L., Ham, W., & **Ramscar, M.** (2002). What is universal in event perception? Comparing English & Indonesian speakers. Proceedings of the 24th Annual Conference of the Cognitive Science Society. Fairfax, VA.

34. Lynott, D. & **Ramscar, M.** (2001). Can we model conceptual combination using distributional information? Proceedings of the Twelfth Irish Conference on Artificial Intelligence and Cognitive Science, NUI, Maynooth.

35. **Ramscar, M.** (2001). The influence of semantics on past-tense inflection. Proceedings of the 23rd Annual Conference of the Cognitive Science Society, University of Edinburgh.

36. Boroditsky, L, **Ramscar, M.** & Frank, M. (2001) The roles of body and mind in abstract thought. Proceedings of the 23rd Annual Conference of the Cognitive Science Society. University of Edinburgh.

37. MacDonald, S. & **Ramscar, M.** (2001). Testing the Distributional Hypothesis: The Influence of Context on Judgements of Semantic Similarity. Proceedings of the 23rd Annual Conference of the Cognitive Science Society, University of Edinburgh.

38. Yarlett, D. & **Ramscar, M.** (2001). Structural Determinants of Counterfactual Reasoning. Proceedings of the 23rd Annual Conference of the Cognitive Science Society, University of Edinburgh.

39. Alloway, T, **Ramscar, M.** & Corley, M. (2001). The Role of Language on Thought in Spatio-temporal Metaphors. Proceedings of the 23rd Annual Conference of the Cognitive Science Society, University of Edinburgh.

40. Connell, L. & **Ramscar, M.** (2001). Using Distributional Measures to Model Typicality in Categorization. Proceedings of the 23rd Annual Conference of the Cognitive Science Society, University of Edinburgh.

41. Connell, L. & **Ramscar, M.** (2001). Modeling canonical and contextual typicality using distributional measures. Proceedings of the Third International Conference on Cognitive Science, Beijing, China.

42. Lynott, D. & **Ramscar, M.** (2001). Modeling conceptual combination using distributional information. Proceedings of the Third International Conferenceon Cognitive Science, Beijing, China.

43. **Ramscar, M.** & Yarlett, D. (2000). The use of a high-dimensional, "environmental" context space to model retrieval in analogy and similarity-based transfer. Proceedings of the 22nd Annual Conference of the Cognitive Science Society, University of Pennsylvania.

44. Yarlett, D. & **Ramscar, M.** (2000). Structure-Mapping Theory and Lexico-Semantic Information. Proceedings of the 22nd Annual Conference of the Cognitive Science Society, University of Pennsylvania.

45. Heneveld, A., Bundy, A., **Ramscar, M.**, & Richardson, J. (2000). Memory-Based Problem Solving and Schema Induction in Go, Proceedings of the 22nd Annual Conference of the Cognitive Science Society, University of Pennsylvania.

46. **Ramscar, M.** (2000). Evidence for the processing of re-representations during the mapping of externally represented analogies. Proceedings of the 22nd Annual Conference of the Cognitive Science Society, University of Pennsylvania.

47. **Ramscar, M.** & Hahn, U. (1998). Wittgenstein and the ontological status of analogy. In Holyoak, K, Gentner, D and Kokinov, B (eds.) Advances in Analogy Research. Sofia, Bulgaria: New Bulgarian University Press.

48. **Ramscar, M.** & Hahn, U. (1998). What family resemblances are not: The continuing relevance of Wittgenstein to the study of concepts and categories. Proceedings of the 20th Annual Conference of the Cognitive Science Society, University of Wisconsin - Madison.

49. Darrington, S., Lingstadt, T. & **Ramscar, M.** (1998). Analogy as a sub-process of categorisation. Proceedings of the 20th Annual Conference of the Cognitive Science Society, University of Wisconsin - Madison.

50. **Ramscar, M.**, Pain, H., Darrington, S., & Lee, J. (1998). Examples and generalisations. Proceedings of the 20th Annual Conference of the Cognitive Science Society, University of Wisconsin - Madison.

51. **Ramscar, M.** (1997). Wittgenstein and the representation of psychological categories, Similarity and categorisation: SimCat 97, Department of Artificial Intelligence, University of Edinburgh.

52. **Ramscar, M.**, Pain, H., & Cooper, R. (1997). Is there a place for semantic similarity in the analogical mapping process? Proceedings of the 19th Annual Conference of the Cognitive Science Society, Stanford University.

53. **Ramscar, M.** & Pain, H. (1996). Can a real distinction be made between cognitive theories of analogy and categorisation? Proceedings of the 18th Annual Conference of the Cognitive Science Society, University of California, San Diego.

6. Presentations

6.1 Invited Talks & Colloquia

1. (2021). Invited Talk: Online Workshop on Modal and Amodal Cognition, Department of Psychology, Tübingen University, Germany

2. (2020) Invited Talk: Bridging silos: Learning mechanisms for first language. Online Workshop, Department of Psychology, University of Alberta, Canada.

3. (2020) Invited Talk: Workshop on Implications of psycho-computational modelling for Morphological Theory (PsyComMT 2020), Vienna, Austria

4. (2019) Invited Talk, TEDlab, Department of Brain and Cognitive Sciences, MIT, MA.

5. (2018) Invited Colloquium: Department of Psychology, Liverpool University, Liverpool, UK

6. (2018) Invited Plenary: "The Schultink Lecture," LOT Summer School, Groningen University, Netherlands

7. (2017) Invited Talk: Workshop on Population effects on languages (PopLang), Lyon, France

8. (2017) Invited Colloquium: Czech National Corpus, Prague, Czech Republic.

9. (2017) Invited Colloquium: Linguistics Department, Charles University, Prague, Czech Republic.

10. (2017) Invited Plenary: International Symposium on Polyadjectival Nominal Phrases, Edge Hill University, Ormskirk, UK

11. (2017). Invited Talk: Symposium on Quantitative Morphology, 10th International Morphological Processing Meeting, SISSA, Trieste, Italy.

12. (2017). Invited Talk: Leopoldina (German National Academy of Sciences) Workshop on Replication in Psychology, Würzburg University, Germany

13. (2017). Invited Colloquium: Linguistics Department, Cambridge University, UK.

14. (2016). Invited Colloquium: Institute for Mathematical Behavioral Sciences, UC Irvine.

15. (2016). Invited Colloquium: Division of Psychology & Language Sciences, University College London, UK.

16. (2016). Invited Colloquium: Department of Comparative Linguistics, Zurich University, Switzerland

17. (2016). Invited Plenary: 17th International Morphology Meeting, University of Vienna, Austria.

18. (2015). Invited Keynote: Workshop on "Studying Language Learning: From the laboratory to the classroom," Tübingen University, Germany.

19. (2015). Invited Colloquium: Psychology Department, Würzburg University, Germany.

20. (2015). Invited Talk: Workshop on the Future of Aging: Centre for Integrative Neuroscience, Tübingen University, Germany.

21. (2015). Invited Talk: Workshop on Communication Deficits, Bremen University, Germany.

22. (2015). Invited Colloquium: Linguistics Department, Lyon University, France.

23. (2015). Invited Talk: Workshop on Frequency metrics in psycho- and sociolinguistics, Freiburg University, Germany

24. (2015). Invited Talk: First International Quantitative Morphology Conference, University of Belgrade, Serbia.

25. (2015). Invited Talk: Workshop on Child Language Development, University of Manchester, UK.

26. (2015). Invited Colloquium: Department of Linguistics, Saarland University, Germany.

27. (2015). Invited Colloquium: Department of Cognitive Science, Rensselaer Polytechnic Institute, New York.

28. (2014). Invited Colloquium: Basque Center on Cognition Brain and Language, San Sebastián.

29. (2014). Invited Colloquium: Department of Psychology, University of Sheffield, UK.

30. (2014). Invited Talk: Workshop on Corpus resources for quantitative and psycholinguistic analysis. Eszterházy College, Hungary

31. (2014). Invited Talk: International Conference on the Cross-linguistic Comparison of Indo-Germanic and Semitic Languages. University of Konstanz, Germany.

32. (2014). Invited Talk: Workshop on Information Theory, 8th International Conference on Construction Grammar, University of Osnabrück, Germany.

33. (2014). Invited Talk: Symposium on Child Language Development, Max Plank Institute of Psycholinguistics, Nijmegen, Netherlands.

34. (2014). Invited Talk: Linguistics Department, Lyon University, France.

35. (2014). Invited Talk: SfSB, Tübingen University, Germany.

36. (2013). Invited Colloquium: Laboratoire de Psychologie Cognitive, CNRS, Aix-Marseille Université, France.

37. (2013). Invited Talk: "What Can We Do With 500 Billion Words?" Workshop, Indiana University, Bloomington, IN.

38. (2013). Invited Talk: Forum Scientiarum – Kognititionswissenschaft, University of Tübingen, Germany.

39. (2013). Invited Talk: Symposium on Discriminative Learning & Morphology, 8th International Morphological Processing Conference, Cambridge, UK.

40. (2013). Invited Talk: Artificial Grammar Learning: Learnability, Complexity, and Meaning, University of Tübingen, Germany.

41. (2013). Invited Colloquium: Cognitive Development Center, Central European University, Budapest, Hungary.

42. (2013). Invited Colloquium: Department of Psychology, Warwick University, UK.

43. (2013). Invited Colloquium: Department of Cognitive, Perceptual and Brain Sciences, University College London, UK.

44. (2013). Invited Colloquium: Cognitive Science Institute, Osnabrück University, Germany.

45. (2013). Invited Colloquium: Donders Centre for Cognition, Nijmegen University, Netherlands.

46. (2013). Invited Talk: Department of Psychology, Indiana University, Bloomington, IN.

47. (2013). Invited Talk: Department of Speech & Hearing, Indiana University, Bloomington, IN.

48. (2013). Invited Plenary: President's Symposium, Annual Meeting of the Society For Computers in Psychology, Toronto, Canada.

49. (2012). Invited Talk: Workshop on Information Density and Linguistic Variation, DGfS, Frankfurt, Germany.

50. (2011). Invited Colloquium: Department of Psychology, Indiana University, Bloomington.

51. (2011). Invited Plenary: B.F. Skinner Lecture, 37th Annual Association of Behavioral Analysis International Convention, Denver, CO.

52. (2011). Invited Talk: Quantitative Measures in Morphology and Morphological Development, UC San Diego, CA.

53. (2011). Invited Talk: Department of Psychology, UC San Diego, CA.

54. (2011). Invited Talk: Department of Psychology, University of Pennsylvania, PA.

55. (2011). Invited Talk: Department of Psychology, Princeton University, NJ.

56. (2010). Invited Talk: Symbolic System Forum, Stanford, CA.

57. (2009). Invited Talk: Stanford Humanities Center Research Workshop, *Uncertainty in Language*, Stanford, CA.

58. (2009). Invited Colloquium: Department of Psychology, UC Merced, CA.

59. (2008). Invited Talk: Department of Brain and Cognitive Sciences, MIT, MA.

60. (2008). Invited Colloquium: Sackler Institute, Cornell University, NY.

61. (2008). Invited Colloquium: Institute for Research in Cognitive Science, University of Pennsylvania, PA.

62. (2008). Invited Talk: Social Psychology Seminar, Stanford University, CA.

63. (2007). Invited Talk: Psychology of Language Tea, Department of Linguistics, Stanford University, CA.

64. (2007). Invited Colloquium: Department of Psychology, UT Austin, TX.

65. (2006). Invited Colloquium: Distinguished Speaker Series, Department of Cognitive Science, UC San Diego, CA.

66. (2006). Invited Talk: Department of Psychology, UT Austin, TX.

67. (2006). Invited Talk: Sackler Institute, Cornell University, NY.

68. (2006). Invited Colloquium: Max Planck Institute of Evolutionary Anthropology, Leipzig, Germany.

69. (2005). Invited Colloquium: Department of Cognitive Science, UC San Diego, CA.

70. (2005). Invited Colloquium: Department of Brain and Cognitive Sciences, MIT, MA.

71. (2005). Invited Colloquium: Department of Linguistics, UC San Diego, CA.

72. (2004). Invited Colloquium: Department of Psychology, UC Berkeley, CA.

73. (2004). Invited Colloquium: Department of Psychology, Manchester University, UK.

74. (2003). Invited Colloquium: Department of Brain and Cognitive Sciences, MIT, MA.

75. (2003). Invited Talk: Distinguished Lecture Series, Bing Nursery School, Stanford University, CA.

76. (2003). Invited Talk: Developmental Brown Bag, Stanford University, CA.

77. (2003). Invited Talk: Workshop on Spatial Foundations of Language, Indiana University, Bloomington, IN.

78. (2003). Invited Talk, Max Plank Institute of Psycholinguistics, Nijmegen, Netherlands.

79. (2003). Invited Colloquium: Department of Psychology, UC Santa Cruz, CA.

80. (2003). Invited Talk: Experimental Psychology Society Meeting, University College London, UK.

81. (2003). Invited Talk: Symbolic Systems Forum, Stanford University, CA.

82. (2003). Invited Talk: Social Psychology Seminar, Stanford University, CA.

83. (2002). Invited Talk: "FRISEM" Cognitive Psychology Seminar, Stanford University, CA.

84. (2002). Invited Talk: Developmental Brown Bag, Stanford University, CA.

85. (2002). Invited Colloquium: Department of Psychology, Carnegie Mellon University, PA.

86. (2002). Invited Colloquium: Department of Psychology, Stanford University, CA.

87. (2001). Invited Colloquium: Max Planck Institute of Evolutionary Anthropology, Leipzig, Germany.

88. (2001). Invited Colloquium: Department of Psychology, Stanford University, CA.

89. (2001). Invited Colloquium: Linguistic Circle, Department of Linguistics, University of Edinburgh, UK.

90. (2001). Invited Talk: ICCS/HCRC Seminar, Division of Informatics, University of Edinburgh, UK.

91. (2000). Invited Talk: Department of Psychology, Stanford University, CA.

92. (2000). Invited Colloquium: Department of Computer Science, University College Dublin, Ireland.

93. (2000). Invited Talk: ICCS/HCRC Seminar, Division of Informatics, University of Edinburgh, UK.

94. (1999). Invited Talk: Division of Informatics, University of Edinburgh, UK.

6.2 Presentations at Conferences & Workshops

1. (2017) European Society for Cognitive Psychology (ESCoP) Potsdam, Germany

2. (2016) 38th Annual Meeting of the Cognitive Science Society, Philadelphia, PA

3. (2016). Anamorphosys Workshop. Lyon, France.

4. (2016). International Meeting of the Psychonomic Society, Granada, Spain

5. (2016). Workshop on Information Theory in Morphology: 17th International Morphology Meeting, University of Vienna, Austria.

6. Symposium Organizer / Chair. (2015). "Generative and Discriminative Models in Cognitive Science", 37th Annual Meeting of the Cognitive Science Society, Pasadena, CA. Co-organized with Bradley Love.

7. (2014). Symposium on Information Theory in Morphology, 16th International Morphology Meeting, Budapest, Hungary. Joint presentation with Jim Blevins.

8. (2014). 55th Annual Meeting of the Psychonomic Society, Long Beach, California.

9. (2013). 54th Annual Meeting of the Psychonomic Society, Toronto, Canada.

10. (2013). 35th Annual Meeting of the Cognitive Science Society, Berlin, Germany.

11. (2013). 46th Annual Meeting of the Society of Mathematical Psychology, Potsdam, Germany.

12. (2012). 86th Annual Meeting of the Linguistic Society for America (LSA), Portland.

13. (2012). 8th International Conference on the Mental Lexicon, Montreal, Canada.

14. (2011). 18th Annual Cognitive Neuroscience Meeting, San Francisco, CA.

15. (2011). 33rd Annual Meeting of the Cognitive Science Society, Boston, MA.

16. (2011). 44th Annual Meeting of the Society for Mathematical Psychology, Boston, MA.

17. (2010). 32nd Meeting of the Cognitive Science Society, Portland, OR.

18. (2010). Conceptual Structure Discourse, and Language Conference, UCSD, San Diego, CA

19. (2009). 9th International Conference on Cognitive Modelling, Manchester, UK.

20. (2009). 42nd Annual Meeting of the Society for Mathematical Psychology, Amsterdam, Netherlands.

21. (2009). 2nd International Analogy Conference, Sofia, Bulgaria.

22. (2008). 29th Annual Conference of the Cognitive Science Society, Nashville, TN.

23. (2007). 29th Annual Conference of the Cognitive Science Society, Nashville, Tennessee, USA.

24. (2004). 45th Annual Meeting of the Psychonomic Society, Minneapolis.

25. (2003). Workshop on Syntax, Semantics and Statistics, Neural Information Processing Systems, Vancouver, B.C.

26. (2003). Boston University Conference on Language Development, Boston, MA.

27. (2003). 25th Annual Conference of the Cognitive Science Society, Boston, MA.

28. (2003). 8th International Cognitive Linguistics Conference - Special Session on Fictive Motion.

29. (2002). 24th Annual Conference of the Cognitive Science Society, George Mason University.

30. (2002). 43rd Annual Meeting of the Psychonomic Society, Kansas City.

31. (2002). Architectures and Mechanisms for Language Processing (AMLaP), Canary Islands.

32. (2001). 7th International Cognitive Linguistics Conference, UC Santa Barbara.

33. (2001). 23rd Annual Conference of the Cognitive Science Society, University of Edinburgh.

34. (2001). Meeting of European Society for Cognitive Psychology / BPS, University of Edinburgh

35. (2000). 22nd Annual Conference of the Cognitive Science Society, University of Pennsylvania.

36. (1999). 20th Annual Conference of the Cognitive Science Society, Wisconsin-Madison.

37. (1998). International Workshop on Analogy, Sofia, Bulgaria.

38. (1997). 19th Annual Conference of the Cognitive Science Society, Stanford University.

39. (1997). International Workshop on Similarity and Categorisation, Edinburgh.

40. (1997). EuropIA 97, Department of Architecture, University of Edinburgh.

41. (1996). 18th Annual Conference of the Cognitive Science Society, San Diego.

7. Teaching & Mentorship

7.1 Courses Taught

Graduate
- Discriminative Linguistics
- The Origins of Communication
- Foundations of Cognition
- Information Theoretic Models of Language and Cognition
- Aping: Imitation and the Development of Control
- Empirical and Analytical Research Methods
- Themes and Methods in Cognitive Psychology
- Coding, Representation & Meaning
- Advanced Topics in Cognitive Modelling

Undergraduate
- Psycholinguistics
- Introduction to Mind & Brain for Linguists
- Communicative Development

- Birds to Words: Communication Cognition and Language
- Introduction to Linguistics
- Philosophical Issues in Artificial Intelligence
- Introduction to Cognitive Modelling
- Introduction to Cognitive Science
- Advanced Prolog Programming

7.2 Invited Courses Taught

Discriminative Linguistics: Netherlands Graduate School in Linguistics (LOT), 25-30 June, 2018, Rijksuniversiteit Groningen, Netherlands

Discriminative Linguistics: 11th Summer School of Linguistics, 20 to 26 August 2017, Litomyšl, Czech Republic

7.3 Syllabus Design

Artificial Intelligence Syllabus & Teaching committees (1997-2001)
Cognitive Science Syllabus & Teaching committees (1999-2001)
Course Organiser for 1st Year Artificial Intelligence (1997-1999)

7.4 Advising
Groningen University

Doctoral

Dorothée Hoppe	Ph.D Student, Center for Language and Cognition (current)

Tübingen University

Doctoral

Maja Linke	Ph.D Student, Linguistics (current)

Masters

Dorothée Hoppe	MSc Linguistics (2016); PhD student in Linguistics, Groeningen University
Philip Schulz	MSc Linguistics (2013); PhD student in Machine Translation, Universiteit van Amsterdam.

Undergraduate (Honors)

Josh Ring	B.S. Cognitive Science (2015); MSc student in Artificial Intelligence, Radboud University Nijmegen.
Matthias Villing	B.S. Cognitive Science (2013); Watchmaker.

University College London

Doctoral

Masa Vujovic	Ph.D Student, Language Sciences (2020)

Stanford University

Doctoral

Inbal Arnon	Professor of Psychology, University of Haifa.
Nicolas Davidenko	Associate Professor of Psychology, UC Santa Cruz.

Daniel Yarlett	Data Scientist, Flywheel Networks.
Asha Halima Smith	Researcher, Proteus Biomedical.
Adam November	Data Analyst, Disney Interactive Media Group.
Douglas J MacKinnon	Faculty - Naval Postgraduate School.

Masters

Michael C. Frank	Associate Professor of Psychology, Stanford University.
Kevin J. Holmes	Assistant Professor of Psychology, Colorado College.
Joseph Klein	Product Manager at Playdom.

Undergraduate (Honors)

Ariel James	NSF Graduate Research Fellow; PhD, University of Illinois at Urbana-Champaign. Assistant Professor, Macalester College
Justine Kao	Robert M. Golden Medal for Honors Thesis; NSF Graduate Research Fellow; PhD ,Stanford. Data Science Manager, Siri Natural Language Understanding
Richard Futrell	Robert M. Golden Medal for Honors Thesis; PhD student in Brain & Cognitive Science at MIT; Assistant Professor UC Irvine

University of Edinburgh

Masters

Matthijs Van der Meer	Assistant Professor of Biology at the Centre for Theoretical Neuroscience, University of Waterloo.
Danielle Matthews	Professor of Developmental Psychology at Sheffield University.
Dermot Lynott	Best Dissertation Prize (2000), Senior Lecturer in Psychology (Faculty Rank) at Lancaster University.
Louise Connell	Senior Lecturer in Psychology (Faculty Rank) at Lancaster University.
Malte Huebner	Best Dissertation Prize (2001), German Council of Economic Experts.
Daniel Yarlett	Best Dissertation Prize (1999), Data Scientist at Flywheel.
Robert Ahrens	Principle Software Engineer at Compete, Inc.
Annabel Harrison	Translator and Editor.

8. Service Activities

8.1. Administration

Edinburgh

AI Syllabus & Teaching committees
Cognitive Science Syllabus & Teaching committees
Degree Programme Co-ordinator for the AI & Psychology Degree
Degree Programme Co-ordinator for the AI & Linguistics Degree
Course Organiser for 1st Year AI

Stanford

Departmental Safety committee
Departmental Computer committee
Institutional Review Board for Human Participants (Non-Medical)
Graduate Admission committee
Faculty Hiring committee

8.1 Ad Hoc Reviewing

Nature, Cognitive Neuroscience, Journal of Cognitive Neuroscience, Frontiers in Systems Neuroscience, Language, Morphology, Language & Cognitive Processes, Language, Cognition & Neuroscience, Language & Cognition, Psychological Review, Psychological Science, Child Development, Developmental Science, Developmental Psychology, Journal of Child Language, Cognitive Science, Cognitive Psychology, Journal of Memory and Language, Cognition, Memory and Cognition, Journal of Experimental Psychology: Learning Memory & Cognition, Psychonomic Bulletin and Review, PloS One, Trends In Cognitive Sciences, Quarterly Journal of Experimental Psychology, Design Studies, National Science Foundation (US); Engineering and Physical Science Research Council (UK); The Science Foundation (Israel)

9. Popular Outreach

9.1 Media Coverage

My research has been covered in the mainstream media by outlets such as: BBC World Service, BBC Radio 4, National Geographic, the New York Times, Scientific American Mind, Discover, the Los Angeles Times, the Guardian, Business Insider, The Daily Telegraph, Forbes, the Huffington Post, US News & World Reports, the Atlantic Monthly, Wired, Science Daily, the Independent, the National Post, the Times of India, Medical Daily, Utne Reader, and Psychology Today, among others.

9.2 Research Blogging

"The Importance of Being Wrong": https://ramscar.wordpress.com/